

# GV- RK1352 Card Reader

The GV-RK1352 is a card reader with keypad, designed to recognize PIN codes, identification cards or both. Featured with the Wiegand and RS-485 outputs, the unit can be connected to any standard access control panel. GV-RK1352 comes with a weather sealed and IP66 compliant housing for outdoor use.

## 1. Packing List

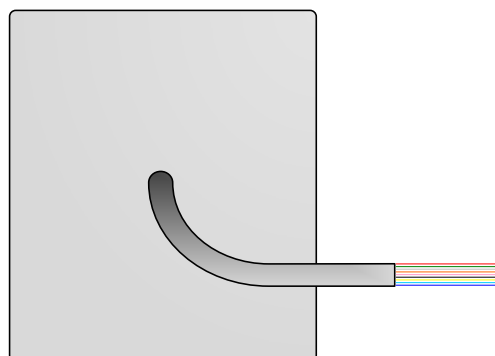
1. GV-RK1352 Card Reader x 1
2. Screw x 2
3. Screw Anchor x 2
4. GV-RK1352 Software CD x 1
5. GV-RK1352 Installation Guide x 1
6. Front Cover Plate x 2



Front View

## 2. Electric Wire

Wire Color	Function
Red	DC 7.5 ~ 12 V
Black	GND
Yellow	Beeper
Orange	Green LED
Light Red	Red LED
Green	Wiegand Data 0
White	Wiegand Data 1
Blue	RS-485 +
Light Blue	RS-485 -



Rear View

### 3. Keypad

When accessing an entry, you can enter the door's PIN code on the keypad or present the card and then enter the card's PIN code on the keypad to be granted access. The access mode is defined on GV-ASManager.

1. **0~9 Number Keys:** Press the number keys to enter the PIN code.
2. **# Key:** Press the # key to confirm the PIN code.
3. **\* Key:** Press the \* key to cancel the PIN code.

### 4. LED Indicator and Beeper

In standby mode, the LED is blue. When a card is read, the LED flashes green and the beeper beeps once.

GV-RK1352 comes with the external control wires of Green LED, Red LED and Beeper. When these control wires are connected to GV-AS Controller, the status of LED and Beeper can be defined by GV-AS Controller. For details on how to configure the settings, refer to *6. Configuring the Beeper and LED Indicator* later in this installation guide.

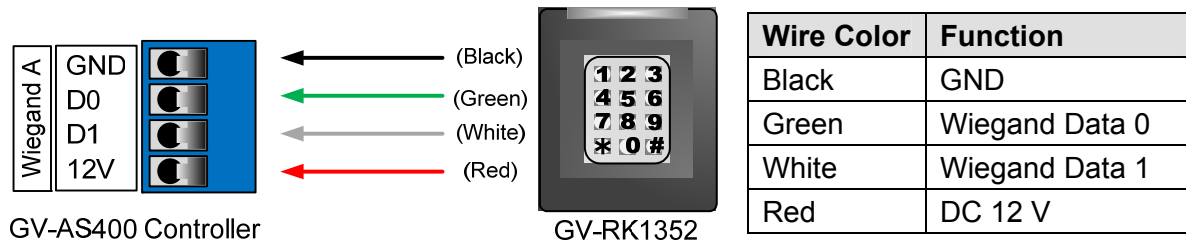
### 5. Connecting GV-RK1352 to GV-AS Controller

The connection between GV-RK1352 and GV-AS Controller varies with different controller models. The following diagrams illustrate **how to connect GV-RK1352 to GV-AS400 Controller** through Wiegand or RS-485 interface.

**Note:** GV-RK1352 is compatible with GV-AS100/200/400 Controllers. However, to enable the keypad function, you can only connect GV-RK1352 to GV-AS100/200 Controllers through the Wiegand interface. For GV-AS400 Controller, the connection through either Wiegand or RS-485 interface is workable for the keypad function.

## 5.1 Connecting through Wiegand Interface

Up to eight GV-RK1352 readers can be connected to GV-AS400 Controller through the controller's Wiegand interface.



## 5.2 Connecting through RS-485 Interface

Up to eight GV-RK1352 readers can be connected together to the RS-485 interface on GV-AS400 Controller. When multiple readers are connected to the same RS-485 interface, you need to specify each reader an ID so that the controller can distinguish one reader from another. You will need to:

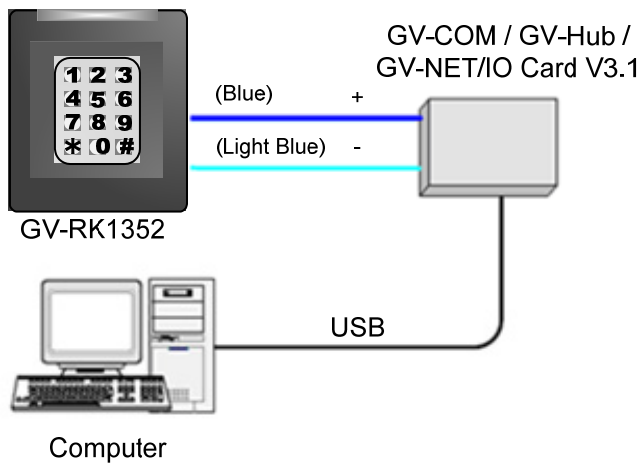
1. Connect GV-RK1352 readers to a computer to access the **GV-RK1352 Config AP**.
2. Define the ID number of each GV-RK1352 reader on the **GV-RK1352 Config AP**.
3. Wire GV-RK1352 readers to GV-AS Controller.

**Note:** If only one GV-RK1352 reader is connected to GV-AS Controller through RS-485 interface, you can skip steps 1 and 2, and the default ID number for the reader will be 0.

### 5.2.1 Connecting GV-RK1352 to a Computer to Access GV-RK1352 Config AP

Using the **GV-RK1352 Config AP** included in the software CD, you can define the ID numbers of multiple readers connected through RS-485 interface.

To start the **GV-RK1352 Config AP**, you have to connect GV-RK1352 to a computer through GV-COM, GV-Hub or GV-NET/IO Card V3.1.



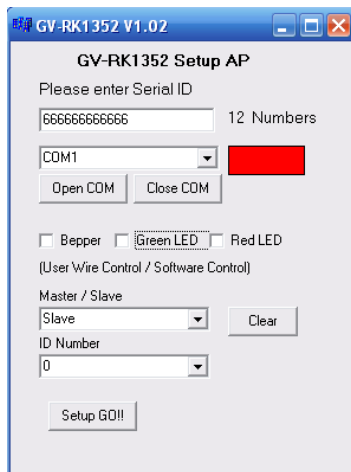
Wire Color	Function
Blue	RS-485 +
Light Blue	RS-485 -

**Note:** GV-RK1352 is not compatible with GV-NET Card and GV-NET/IO Card of versions earlier than V3.

## 5.2.2 Defining ID Numbers of Readers

After GV-RK1352 readers are connected to a computer, follow the steps below to define the ID number of each GV-RK1352 reader:

1. Insert the software CD and the Install Program window will pop up automatically.
2. Select **Install GeoVision USB Devices Driver**.
3. In the GeoVision USB Driver Installer window that appears, select **Install**.
4. Go back to the Install Program window, and select **Run GV-RK1352 Config Utility**. This dialog box appears.

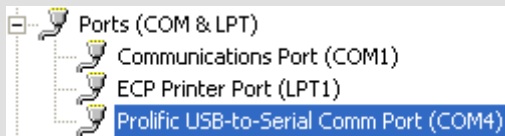


5. Type the barcode number of GV-RK1352 in the Serial ID box. The barcode number is on the rear panel of GV-RK1352.



6. Select the COM port that is connected to GV-RK1352 and click **Open COM**. The red square next to the COM port box should change to blue to indicate the COM port is correct.

**Note:** If the COM port is incorrect, an **“Error opening serial port”** message will appear. To verify the COM port that is connected to GV-RK1352, go to Windows Device Manager. In the Ports (COM & LPT) field, you should see the entry for **Prolific USB-to-Serial Comm Port**. The COM port showing in the entry indicates the COM number currently in use.



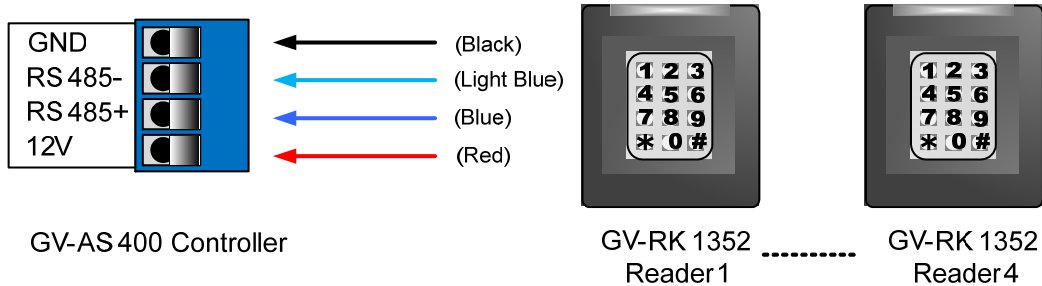
7. Click **Setup GO**. The settings are sent to GV-RK1352.

**Note:** If you select the wrong COM port of GV-RK1352, a **“Fail. Please check Serial ID and comport”** message will appear when you click the **Setup GO** button. Go to Windows Device Manager to find out the COM port of GV-RK1352.

### 5.2.3 Wiring GV-RK1352 to GV-AS Controller

After defining the ID number of the readers, you can connect the wires of GV-RK1352 to GV-AS Controller. Here we use **GV-AS400 Controller** as example to illustrate the wiring.

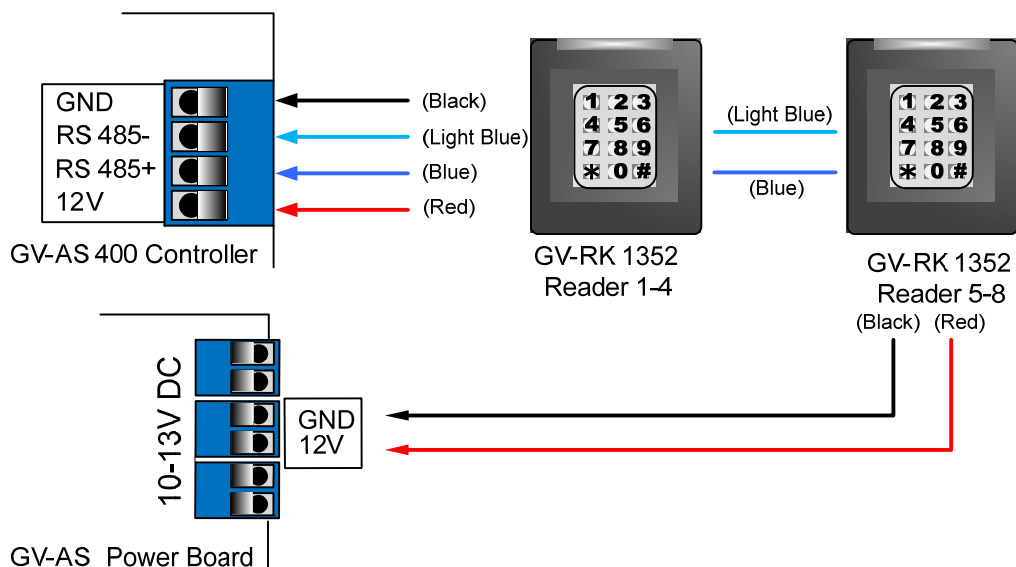
- Connecting four or less readers to GV-AS400 Controller:



Wire Color	Function
Black	GND
Light Blue	RS-485 -
Blue	RS-485 +
Red	DC 12 V

- Connecting five or more readers to GV-AS400 Controller:

For readers five to eight, connect the RS-485 cable to the RS-485 interface on GV-AS400 Controller and then connect the 12V power output and GND of the reader to a 10V to 13V DC power output on the GV-AS Power Board.

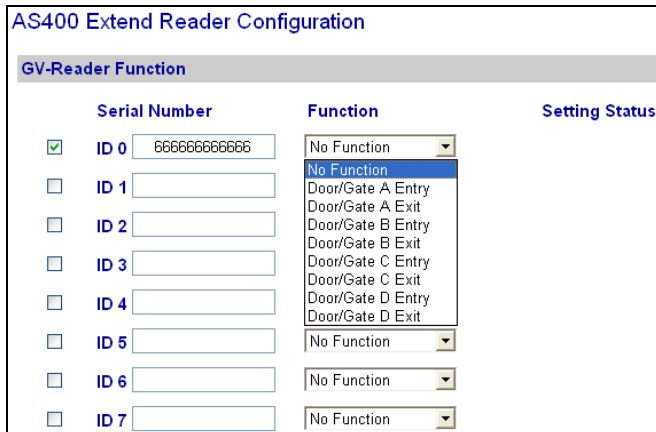


Wire Color	Function
Black	GND
Light Blue	RS-485 -
Blue	RS-485 +
Red	DC 12 V

## 6. Defining Readers on GV-AS Controller Web Interface

To define readers on the Web interface of GV-AS Controller, we use **GV-AS400 Controller** as example. Since GV-AS400 Controller can control up to four doors, you need to specify which door each reader controls.

1. On the GV-AS400 Web interface, click **Extend Reader**. This dialog box appears.



The dialog box titled "AS400 Extend Reader Configuration" contains a section labeled "GV-Reader Function". It features a table with three columns: "Serial Number", "Function", and "Setting Status".

	Serial Number	Function	Setting Status
<input checked="" type="checkbox"/>	ID 0 <input type="text" value="666666666666"/>	No Function	
<input type="checkbox"/>	ID 1 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 2 <input type="text"/>	Door/Gate A Entry	
<input type="checkbox"/>	ID 3 <input type="text"/>	Door/Gate A Exit	
<input type="checkbox"/>	ID 4 <input type="text"/>	Door/Gate B Entry	
<input type="checkbox"/>	ID 5 <input type="text"/>	Door/Gate B Exit	
<input type="checkbox"/>	ID 6 <input type="text"/>	Door/Gate C Entry	
<input type="checkbox"/>	ID 7 <input type="text"/>	Door/Gate C Exit	
<input type="checkbox"/>	ID 8 <input type="text"/>	Door/Gate D Entry	
<input type="checkbox"/>	ID 9 <input type="text"/>	Door/Gate D Exit	
<input type="checkbox"/>	ID 10 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 11 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 12 <input type="text"/>	No Function	
<input type="checkbox"/>	ID 13 <input type="text"/>	No Function	

2. Select the ID number of the reader and type its barcode number. The ID number should be the same with the one you configure through the **GV-RK1352 Config AP**.
3. Select a door/gate for the reader from the Function drop-down list. Click **Submit**.

## 7. Configuring the Beeper and LED Indicator

You can configure the settings of the LED and the beeper by enabling the GV-AS Controller to externally control the LED and Beeper. You will have to:

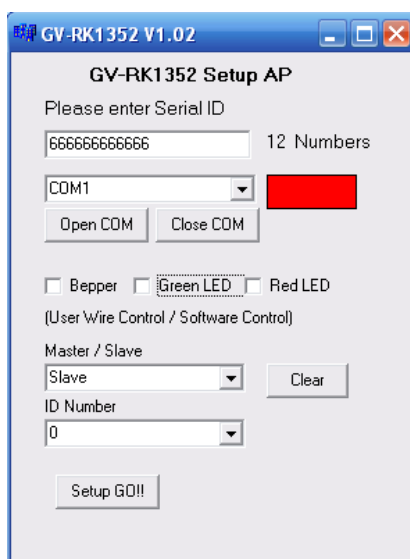
1. Set up the Beeper and LED settings of the reader by using the **GV-RK1352 Config AP**.
2. Wire the Beeper, Red LED and Green LED from GV-RK1352 to GV-AS Controller.
3. Specify the Beeper and LED settings for each door through the Web interface of GV-AS Controller.

### 7.1 Setting up Beeper and LED on GV-RK1352 Config AP

To enable the external controls of the Beeper and LED, start the **GV-RK1352 Config AP** according to the instructions in *Accessing the GV-RK1352 Config AP* earlier in this installation guide.

After **GV-RK1352 Config AP** is started, you have to enable the external controls and set the GV-RK1352 to be slave.

1. Start the **GV-RK1352 Config AP**. Type the barcode number and the COM port of GV-RK1352. The barcode number is on the rear panel of GV-RK1352. Refer to *Defining ID Numbers of Readers* earlier in this installation guide on how to determine the COM port of GV-RK1352.



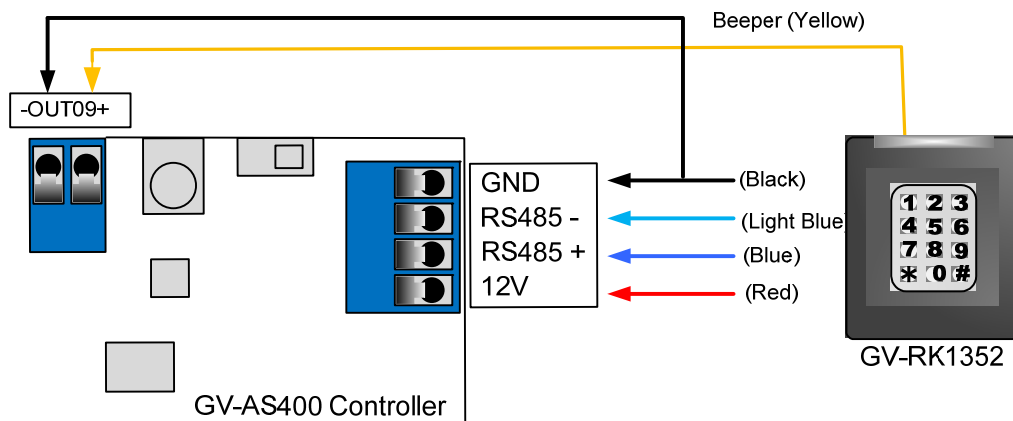


2. To enable external control of Beeper or LED, select **Beeper**, **Green LED** or **Red LED**.
  - **Beeper**: Enables the external control of Beeper.
  - **Green LED**: Changes the standby color to green.
  - **Red LED**: Changes the standby color to red.
3. Select **Slave** from the Master / Slave drop-down list and select an ID number for the reader. The ID number is ranging from 0 to 7.
4. Click **Setup GO**. The settings are sent to GV-RK1352.

After the above settings, you need to connect the Beeper, Red LED and Green LED wires from GV-RK1352 to GV-AS Controller

## 7.2 Wiring the Beeper and LED to GV-AS Controller

To wire the beeper and LED to GV-AS Controller, we use **GV-AS400 Controller** as example. Connect the control wires of GV-RK1352's Beeper, Red LED or Green LED to any of outputs 9 ~ 16 on GV-AS400 Controller. The following diagram is an example on connecting the beeper wire of GV-RK1352 to GV-AS400 Controller.



Wire Color	Function
Black	GND
Yellow	Beeper

### 7.3 Configuring the Beeper and LED Settings for Each Door/Gate

After connecting the wires for Beeper or LED, specify the Beeper or LED settings for each door/gate on the GV-AS Web interface. Here we use **GV-AS400 Controller** as example.

1. On the GV-AS400 Web interface, click **Output Setting**. The page below appears.
2. From the output 9~12, select a door and select **Beeper**, **Green LED**, **Red LED** or **Invert Red LED**. Click **Submit**.



AS400 Output Configuration		
Output Function		
01	Door A	Electric Lock
02	Door A	Event Alarm
03	Door B	Electric Lock
04	Door B	Event Alarm
05	Door C	Electric Lock
06	Door C	Event Alarm
07	Door D	Electric Lock
08	Door D	Event Alarm
09	Door A	Beeper
10	Door B	Green LED
11	Door C	Red LED

- **Beeper:** Enables the external control of Beeper.
- **Green LED:** Changes the standby color to green. When a card is read, the LED flashes green.
- **RED LED:** Changes the standby color to red. When a card is granted access, the LED flashes green. When a card is failed to be granted access, the LED turns off for a very short time and then turns Red.
- **Invert Red LED:** Changes the standby color to no light. When a card is granted access, the LED flashes green. When a card is failed to be granted access, the LED flashes red.

## 8. Firmware Upgrade

GeoVision will periodically release the updated firmware on the website. The new firmware can be simply loaded into GV-RK1352 by using **Upload Application** included in the Software CD.

### Important Notes before You Start

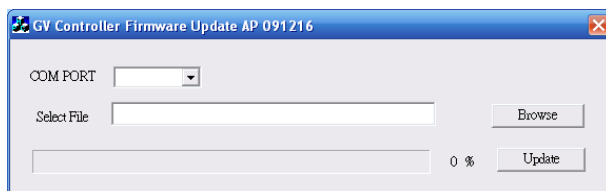
Before you start updating the firmware, please read these important notes:

1. While the firmware is being updated, the power supply must not be interrupted.
2. Do not turn the power off within 10 minutes after the firmware is updated.

**WARNING:** The interruption of power supply during updating causes not only update failures but also damages to the device. In this case, please contact your sales representative and send your device back to GeoVision for repair.

To upgrade firmware:

1. Insert the Software CD, select **Upload Application**, and follow the onscreen instructions to install the program.
2. Double-click the **Upload Application** icon created on your desktop. This dialog box appears.



3. Select the COM port of GV-RK1352.
4. Click the **Browse** button to locate the firmware file (.img) saved at your local computer.
5. Click **Update**.
6. The LED indicator should flash purple during the process of firmware upgrading. When the process is complete, GV-RK1352 will be sounded twice and the LED indicator will change to green.

## 9. Specifications

<b>CPU</b>	8 bit microprocessor
<b>Frequency</b>	13.56 MHz for ISO14443A
<b>Wiegand Interface</b>	Wiegand 26 bit, distance 30 m / 98.43 ft
<b>RS-485</b>	9,600 bps, connect up to 8 GV-RK1352 units
<b>Power</b>	DC 7.5 V ~ 12 V
<b>LED</b>	Red, Green and Blue LED
<b>Beeper</b>	Buzzer
<b>Reader Color</b>	Black
<b>Operating Temperature</b>	-20 °C ~ 60 °C / -4 °F ~ 140 °F
<b>Operating Humidity</b>	10% ~ 90% (no condensation)
<b>Dimensions (W x H x D)</b>	95 x 108 x 23 mm / 3.74 x 4.25 x 0.91 in
<b>Weight</b>	260 g / 0.57 lb
<b>Certification</b>	IP66, CE, FCC

## 10. The number of GV-RK1352 supported by GV-AS

### Controllers

GV-AS Controller Model	GV-RK1352 Interface	
	Wiegand	RS-485
GV-AS100	1	Not support
GV-AS100 with GV-ASBOX	2	4
GV-AS200	4	8
GV-AS400	8	8